

Notice of Allowability

Application No.

10/714,188

Examiner

Beth E. Owens

Applicant(s)

COBBLEY ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 30 July 2004.
2. ☒ The allowed claim(s) is/are 1-6.
3. ☒ The drawings filed on 14 November 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

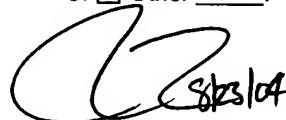
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____



RICHARD ELMS
SUPERVISORY PATENT EXAMINER

TECHNOLOGY CENTER 2800

Terminal Disclaimer

1. The terminal disclaimer filed on 30 July 2004 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 6,329,832 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Allowance

2. Claims 1 through 6 are allowed.
3. The following is an examiner's statement of reasons for allowance:

There is no prior art available nor obvious motivation to combine elements of prior art which teach a method for packaging a flip-chip semiconductor assembly, comprising: providing at least one integrated circuit (IC) die having bond pads on a surface thereof; providing a substrate having electrical pads for mounting the at least one IC die thereto; placing dry conductive epoxy dots on the electrical pads on the substrate; attaching the at least one IC die to the substrate with the bond pads of the at least one IC die in contact with the dry conductive epoxy dots on the electrical pads on the substrate to form the flip-chip semiconductor assembly with the dry conductive epoxy dots forming an electrical interface therebetween; electrically testing the flip-chip semiconductor assembly through the electrical interface of

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the dry conductive epoxy dots; if the flip-chip semiconductor assembly fails testing, then reworking the flip-chip semiconductor assembly and retesting the flip-chip semiconductor assembly or scrapping the flip-chip semiconductor assembly if the flip-chip semiconductor assembly has already been reworked a preset number of times; and if the flip-chip semiconductor assembly passes testing, then encapsulating the at least one IC die on the substrate.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beth E. Owens, Ph.D. whose telephone number is 571.272.1882 and fax phone number for unofficial communications is 571.273.1882.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms, can be reached on 571.272.1869. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9306 for official communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571.272.2800.

BEO

BEO 08.23.04